HIGH RESOLUTION
VANDAL DOME CAMERA
OPERATION MANUAL

Thank you for choosing our high quality camera.
Before attempting to connect operate this unit, please read and follow these instructions.

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1. CAUTIONS

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions;

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note

This equipment has been tested and found to comply with limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / tv technician for help.

Caution

Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

⚠ CAUTION

1. A regulated DC12V 1A power supply is recommended for use with this camera for the best picture and the most stable operation.
   An unregulated power supply can cause damage to the camera.
   When unregulated power supply is applied, product warranty will be out of subject.
2. It is recommended that the camera is used with a monitor that has a CCTV quality 75 video impedance level.
   If your monitor is switched to high impedance then please adjust accordingly.
3. Do not attempt to disassemble the camera to gain access to the internal componets. Refer servicing to your dealer.
4. Never face the camera towards the sun or any bright or reflective light, which may cause smear on the picture and possible damage to the CCD.
5. **Do not remove the serial sticker for the warranty service.**
6. Do not expose the camera to rain or other types of liquid.
7. The apparatus must be connected to a mains socket-outlet with a protective earthing connection.

1. CAUTIONS

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicate that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

This product should not be mixed with other commercial wastes purchased this product, or their local government office, for details of where and how they can take item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.
Household users should contact either the retailer where they for disposal.

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

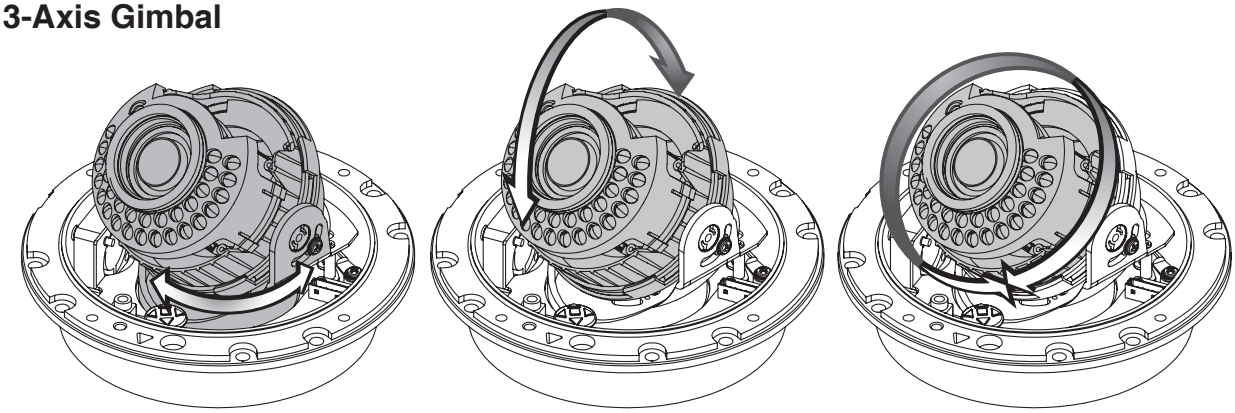
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER.SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance(servicing) instructions in the literature accompanying the appliance

2.Features

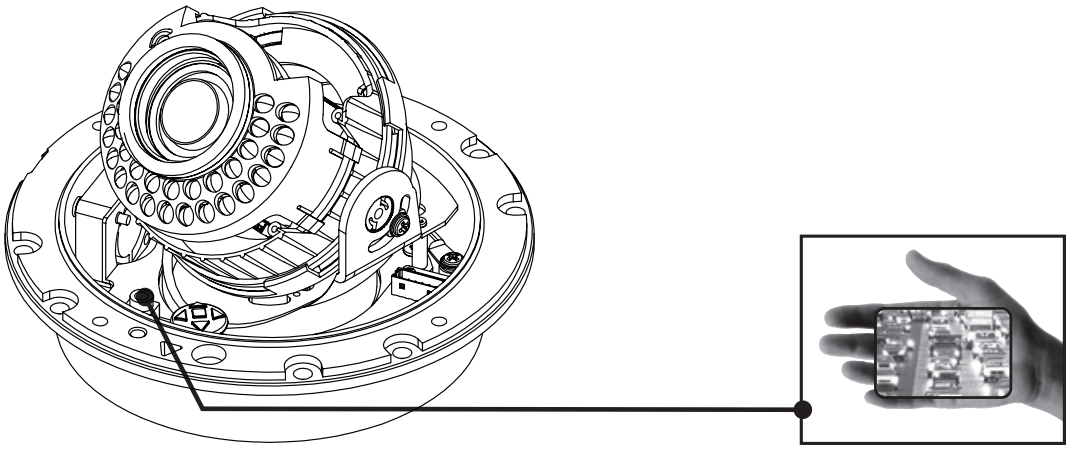
- **1/3˝960H SONY EXview HAD CCD II**
- **High Resolution of 700TV Lines**
- **OSD Function**
- **Multi Language**
  (ENGLISH / JAPANESE / GERMAN / FRENCH / RUSSIAN / PORTUGUESE / SPANISH / CHINESE)
- **2DNR**
- **Privacy Zone**
- **Motion Detect**
- **DC12V / AC24V Dual Voltage**
- **ATR(Adaptive Tone-curve Reproduction / Digital WDR)**
  The function provides gradation compensation to improve the contrast of subjects both low-luminance areas and high luminance areas exist in the same picture
- **3-Axis Gimbal**



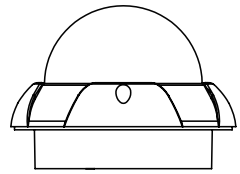
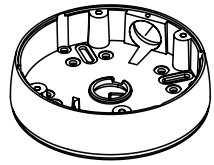
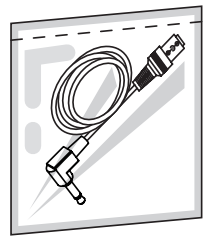
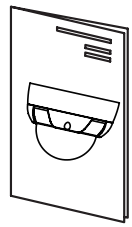
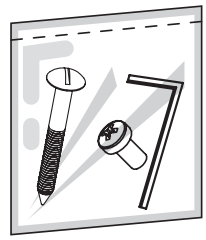
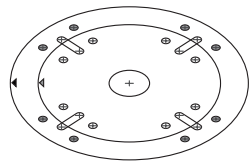
Pan Rotation Tilt Rotation Horizontal Rotation

CAUTION panning the bracket in excess of 3 rotations in one direction maycause damage to the cable.

- **Service Video connector**
  The Service Video Connector also provides the installer with an easy way of configuring the camera.

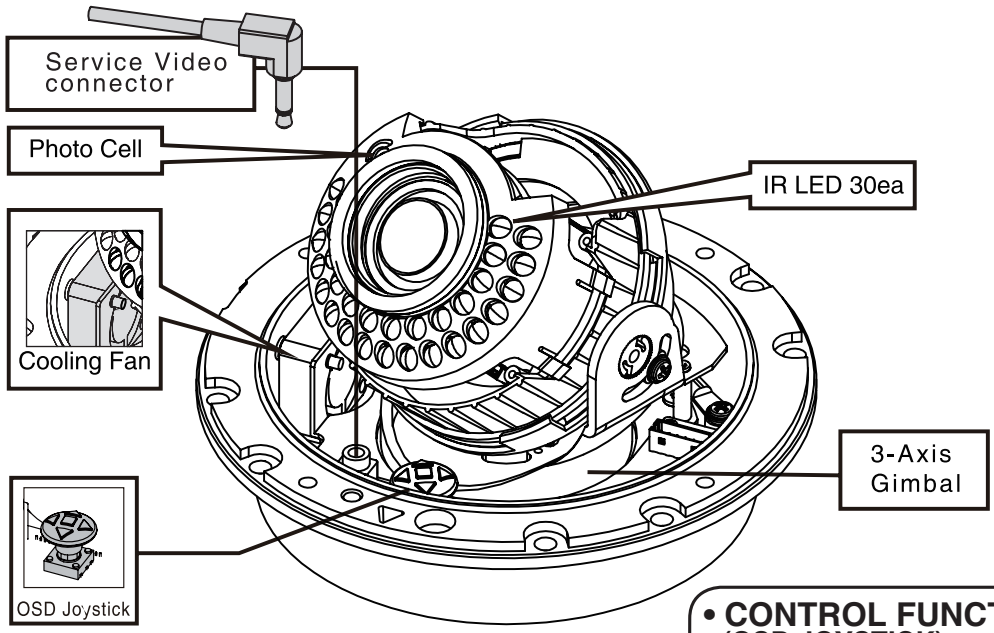


3.Package

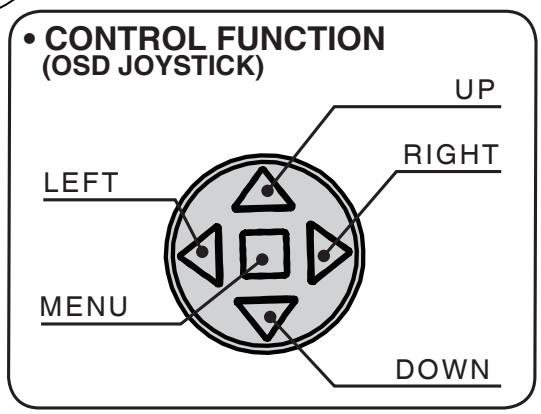
1	VANDAL DOME CAMERA	
2	SURFACE MOUNT	
3	VIDEO OUTPUT TEST CABLE	
4	OPERATION MANUAL	
5	SCREW(M4x10) - 4ea SCREW(5x30) - 4ea SCREW(M4x40.SUS) - 4ea L WRENCH - T20	
6	MOUNT GUIDE	

4.Overview and function

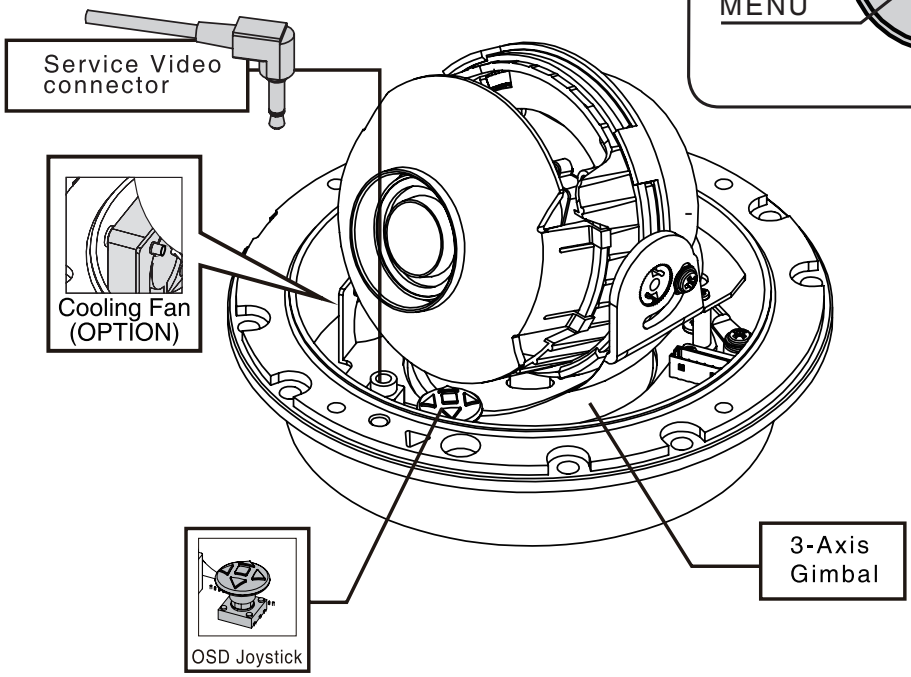
• Name (LED Type)



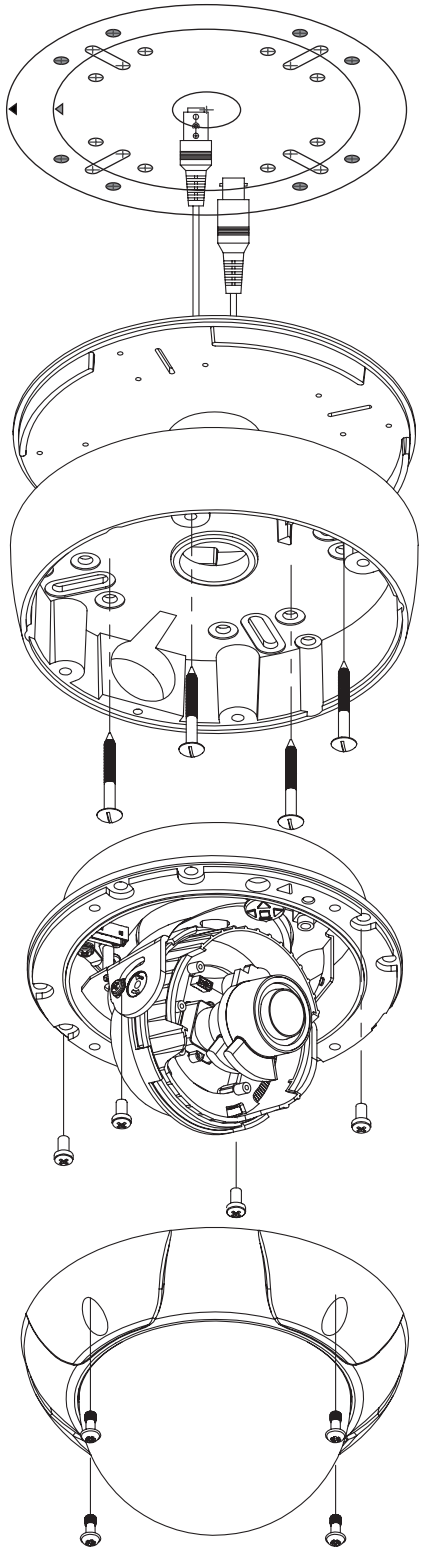
• CONTROL FUNCTION
(OSD JOYSTICK)



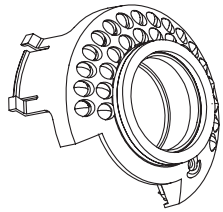
• Name (Standard)



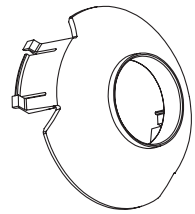
5. Installation



Mount Guide



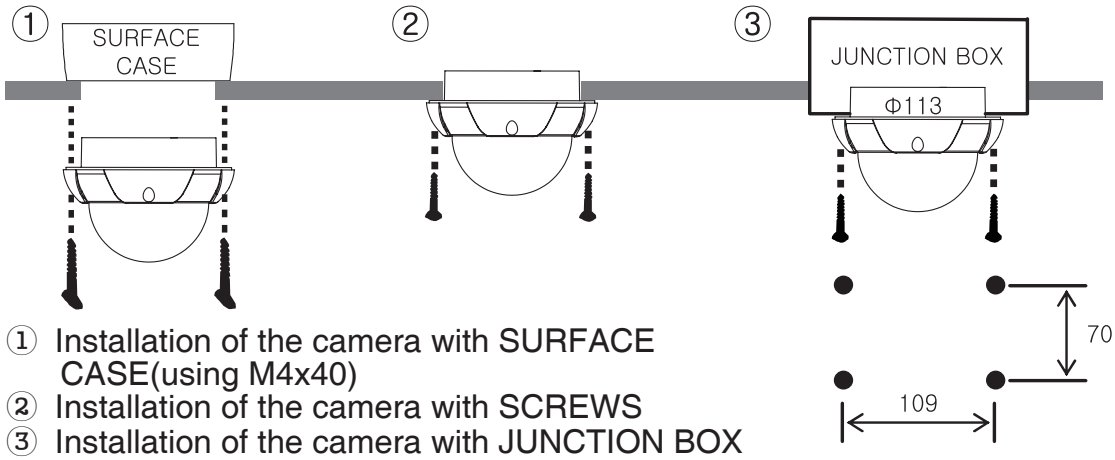
LED Type



Standard Type

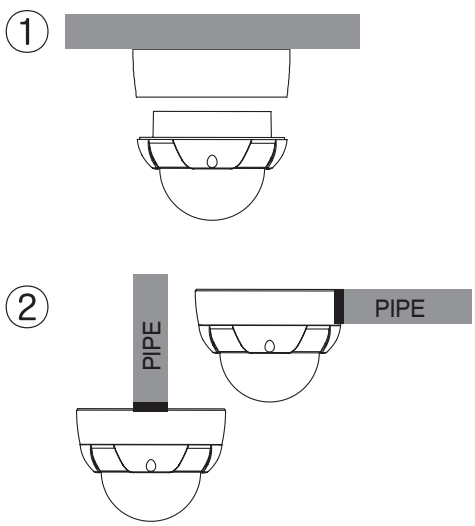
5. Installation

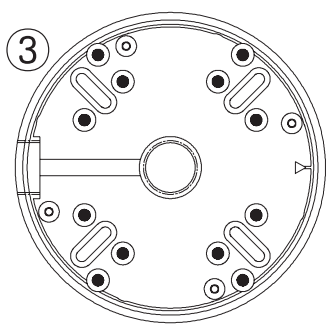
1. Installation of Flush Mount



① Installation of the camera with SURFACE CASE(using M4x40)
② Installation of the camera with SCREWS
③ Installation of the camera with JUNCTION BOX

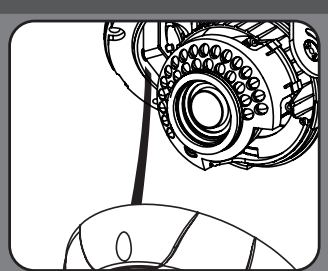
2. Installation of Surface Mount



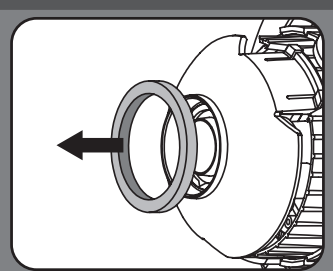


① Installation of the camera on the wall
② Installation of the camera on the 3/4” NPT PIPE
③ Installation of the camera on the JUNCTION BOX

NOTE



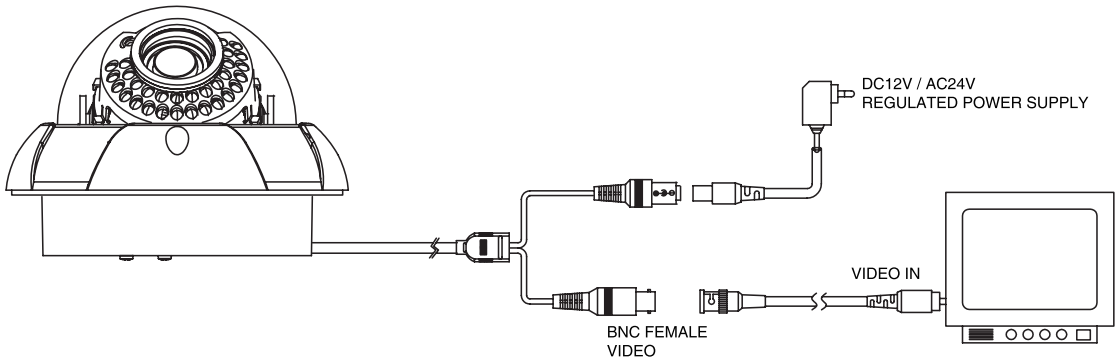
Check the safe wire which should be entirely inserted into camera housing during locking the dome cover to maintain Waterproof condition.



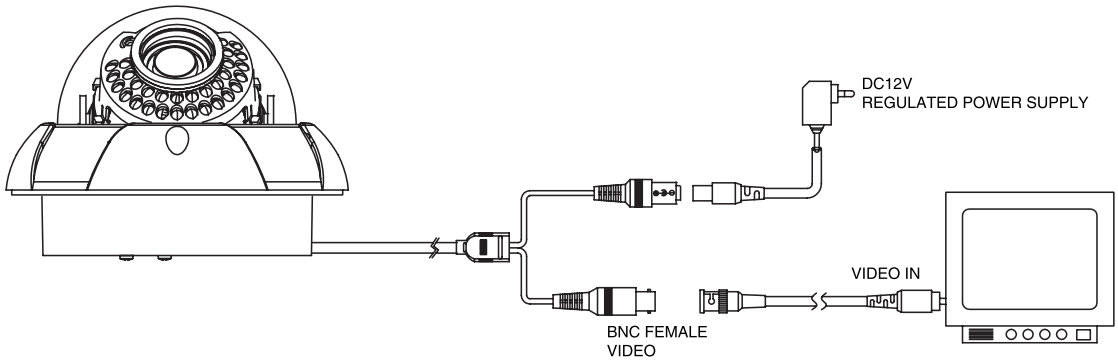
When using the camera without LED take off the rubber.

6.Connection

• **DUAL(DC 12V/AC24V)**



• **DC 12V**

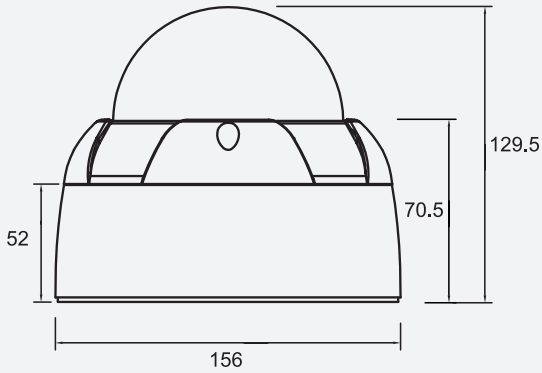


When you install the camera, please glue up the end of cable to keep it stable in order to protect the camera from the humidity problems.

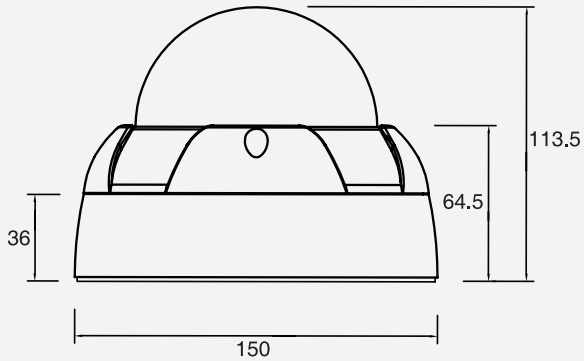
7.Dimensions

Unit : mm

Surface Mount Type

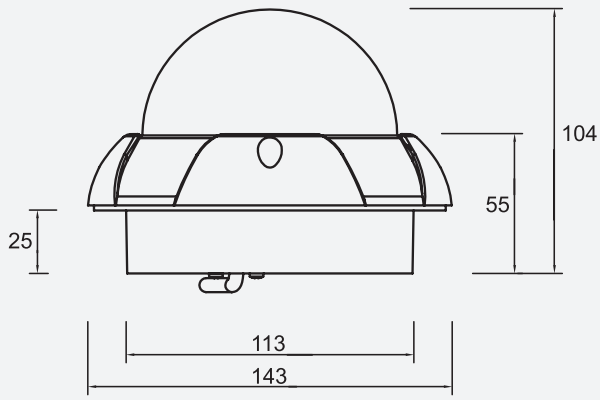


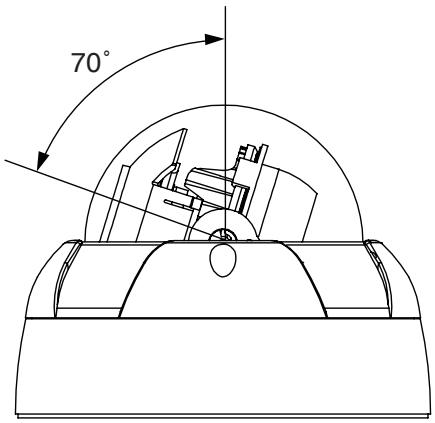
Type A



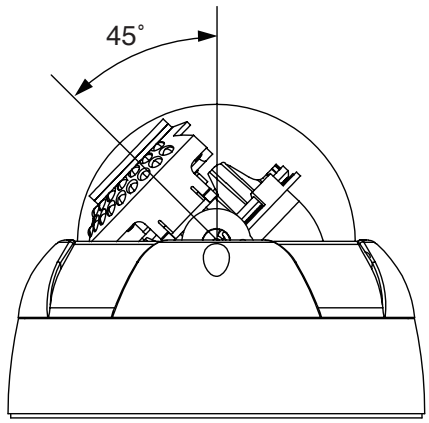
Type B

Flush Mount Type





Standard Type



LED Type

When you fix the focus around 22.0mm in f9.0-22.0mm Varifocal lens, please set short distance focus approximately 3M and do not set long distance focus

8.Specifications

Signal Format		NTSC	PAL
Image Device		1/3˝960H SONY EXview HAD CCD II	
Scanning System		2:1 Interlace	
H.Resolution		700TV Lines	
Scanning Frequency		H:15.734KHz, V:59.94Hz	H:15.625KHz, V:50Hz
Total Pixels		1020(H) X 508(V)	1020(H) X 596(V)
Effective Pixels		976(H) X 494(V)	976(H) X 582(V)
Electronic Shutter Speed		1/60 sec	1/50 sec
S/N Ratio		More than 50dB(AGC Off)	
Gamma		r=0.45	
Min. Illumination		COLOR : 0.05Lux/F1.2, BW : 0.02 Lux/F1.2	
Sync System		Internal	
Video Output		1.0 Vp-p Composite(75Ω)	
OSD		Built in (Inner Key / Joystick)	
BLC		OFF / BLC / HLC	
White Balance		ATW / PUSH / USER1 / USER2 / ANTI CR / MANUAL / PUSH-LOCK	
2DNR		OFF / ON (Level adjustable)	
ATR		OFF / ON (Level adjustable)	
Function		MIRROR / BRIGHTNESS / CONTRAST / SHARPNESS / HUE / GAIN	
Privacy Masking		4 Zones	
Motion Detection		4 Zones	
Day & Night		AUTO	
Language		ENGLISH / JAPANESE / GERMAN / FRENCH / RUSSIAN/ PORTUGUESE / SPANISH / CHINESE	
IP Rating		IP66 (Weatherproof)	
Power Consumption	DC12V	DC 12V (±10%) Max.120mA	
	Dual	DC 12V (±10%) Max.150mA , AC 24V (±10%) Max. 2.3W	
Operating Temperature		-10℃ ~ +50℃	
Storage Temperature		-20℃ ~ +60℃	
Operating Humidity		Less than 80%	
Options		Dual Power, Fan	
Weight		• Surface Mount Type A : Approx. 1.38kg / Type B : Approx. 1.1kg • Flush type : Approx. 730g	
Dimension(mm)		143.0(Φ) x 104.0(mm)	

LED TYPE

Power Consumption	DC12V	DC 12V (±10%) Max. 360mA
	Dual	DC 12V (±10%) Max 430mA , AC 24V (±10%) Max. 5.2W
Min. Illumination		0 Lux (IR LED ON)
IR LED		850nm, 30ea
IR Beam Range		Up to 30M
IR LED Operation		On : 1 Lux, Off : 3 Lux

Specifications and designs are subject to change for improving the functionality of this product without notice.

9. OSD MENU STRUCTURE

MAIN MENU	1st Sub MENU	2nd Sub MENU	3rd Sub MENU	4th Sub MENU
LENS	MANUAL			
	AUTO	TYPE	DC	
		MODE	AUTO,OPEN,CLOSE	
		SPEED	(000 ~ 255)	
		RETURN		
SHUTTER / AGC	AUTO	HIGH LUMINANCE	MODE	SHUT,AUTO IRIS, SHUT+AUTO IRIS
			BRIGHTNESS	(000 ~ 255)
		LOW LUMINANCE	MODE	AGC,OFF
			BRIGHTNESS	x0.25,x0.50,x0.75,x1.00
		RETURN		
	MANUAL	MODE	SHUT+AGC	
		SHUTTER	1/50(PAL),1/100(NTSC) 1/60(NTSC),1/120(PAL) 1/250,1/500,1/1000 1/2000,1/4000,1/10000	
		AGC	6,12,18,24,30,36,42,44.8	
		RETURN		
WHITE BAL	ATW	SPEED	(000 ~ 255)	
		DELAY CNT	(000 ~ 255)	
		ATW FRAME	x0.50,x1.00,x1.50,x2.00	
		ENVIRONMENT	INDOOR,OUTDOOR	
		RETURN		
	PUSH			
	USER1	B-GAIN	(000 ~ 255)	
		R-GAIN	(000 ~ 255)	
		RETURN		
	USER2	B-GAIN	(000 ~ 255)	
		R-GAIN	(000 ~ 255)	
		RETURN		
	ANTI CR			
	MANUAL	LEVEL	24 ~ 103	
		RETURN		
	PUSH LOCK			
BACK LIGHT	OFF,BLC,HLC			
PIC ADJUST	MIRROR	OFF,ON		
	BRIGHTNESS	(000 ~ 255)		
	CONTRAST	(000 ~ 255)		
	SHARPNESS	(000 ~ 255)		
	HUE	(000 ~ 255)		
	GAIN	(000 ~ 255)		
	RETURN			
ATR	ON	LUMINANCE	LOW,MID,HIGH	
		CONTRAST	LOW,MIDLOW,MID,MIDHIGH,HIGH	
		RETURN		
	OFF			

*__SHUT+IRIS__: Both the Shutter and the Mechanical Iris are automatically adjusted according to brightness.
*__Auto Iris(Default)__: The Shutter stays at the manually selected value and only the Mechanical Iris adjusts to brightness.

9. OSD MENU STRUCTURE

MAIN MENU	1st Sub MENU	2nd Sub MENU	3rd Sub MENU	4th Sub MENU
MOTION DET	ON	DETECT SENSE	(000 ~ 255)	
		BLOCK DISP	OFF,ON,ENABLE (CONTROLER)	
		MONITOR AREA	ON,OFF	
		AREA SEL	1/4, 2/4, 3/4, 4/4	
			TOP	NTSC:(000 ~ 244) / PAL: (000 ~ 288)
			BOTTOM	NTSC:(000 ~ 244) / PAL: (000 ~ 288)
			LEFT	NTSC:(000 ~ 474) / PAL: (000 ~ 468)
			RIGHT	NTSC:(000 ~ 474) / PAL: (000 ~ 468)
		RETURN		
	OFF			
NEXT				
EXIT				
SAVE ALL				
PRIVACY	ON	AREA SEL	1/4, 2/4, 3/4, 4/4	
			TOP	NTSC:(000 ~ 244) / PAL: (000 ~ 288)
			BOTTOM	NTSC:(000 ~ 244) / PAL: (000 ~ 288)
			LEFT	NTSC:(000 ~ 474) / PAL: (000 ~ 468)
			RIGHT	NTSC:(000 ~ 474) / PAL: (000 ~ 468)
		COLOR	(1 ~ 8)	
		TRANSP	0.00, 0.50, 0.75, 1.00	
		MOSAIC	OFF,ON	
		RETURN		
	OFF			
NR	NR MODE	OFF,Y,C,Y/C		
	C LEVEL	(000 ~ 015)		
	Y LEVEL	(000 ~ 015)		
	RETURN			
CAMERA ID	ON	EDIT MODE		
		RETURN		
	OFF			
LANGUAGE	ENGLISH, 日本語, DEUTSCH, FRANCAIS, Русский, PORTUGUÊS, ESPAÑOL, 中文			
CAMERA RESET				
BACK				
EXIT				
SAVE ALL				

***Important Note :**

- Any changes made to the camera settings must be saved prior to exiting the OSD menu. Else all changes will be discarded.
- By changing the lens option in the OSD from MANUAL to AUTO will automatically change the SHUTTER/AGC setting from AUTO IRIS to SHUT+AUTO IRIS.(Default:AUTO IRIS)